Z88

THE PRICE OF FREEDOM

IS LESS THAN YOU THINK

The Z88 is a new kind of computer.

A computer that's the size of an A4 pad, weighs a couple of pounds, and drops into your briefcase with plenty of room to spare.

A computer which can provide up to 3 Mbytes of memory … which works on four AA batteries … which comes with a complete suite of powerful, user-friendly software built in.
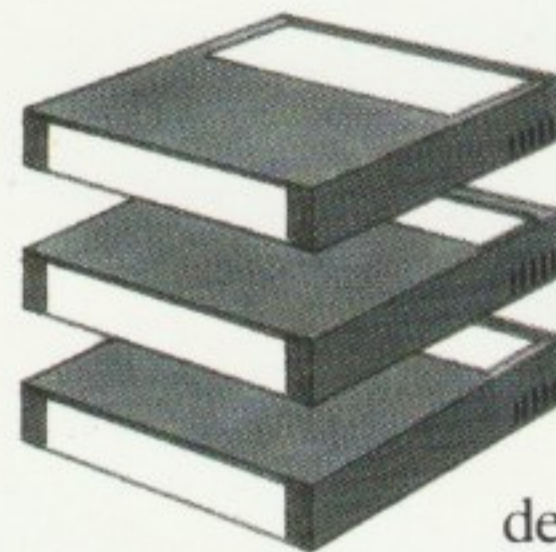
A computer which puts your files, your calc, your diary, *and* the contents of your desktop at your fingertips …

A computer that gives you *all* the capability of a desktop unit, in a package that dramatically increases its convenience.

All for just £249.99 + VAT!

All the RAM you'll ever need . . .

The Z88 has 32K RAM built in, expandable immediately to 416K (enough for around 80 typed A4 pages), and soon to 3 Mbytes – providing more power than most desktops. Expansion RAM is in 32K or 128K solid-state packs (½ Mbyte and 1 Mbyte packs soon). Forget cumbersome disk drives, forget fragile disks!

And all the ROM you can put in your pocket!

Like RAM, EPROM (Erasable Programmable Read-Only Memory) comes on 32K or 128K slot-in packs. With 1 Mbyte packs coming soon, you could put the complete works of Shakespeare on three packs and drop them in your pocket. Compare *that* with the paraphernalia of floppies!
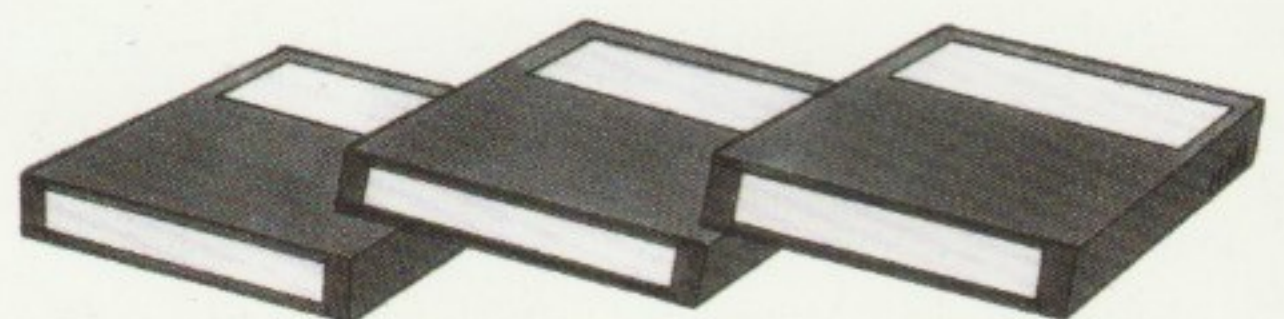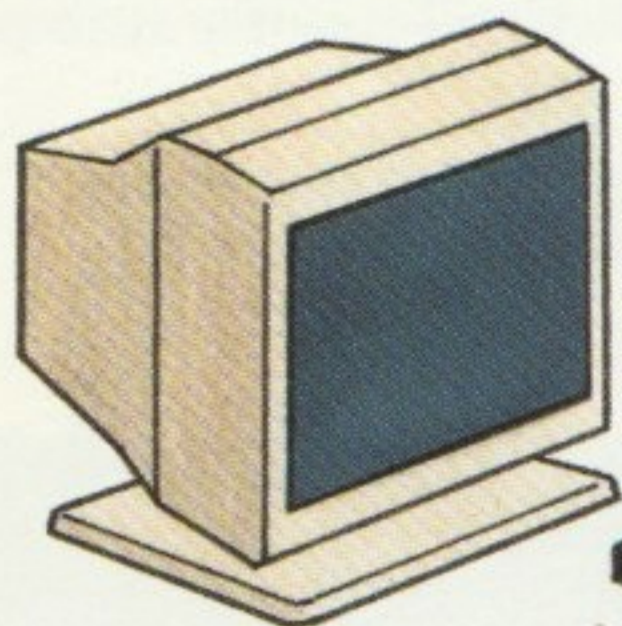
VOLUTIONISE THE WAY YOU WORK

Data in. Data out. Directly . . .

The Z88's resident software formats data for interchange with IBM-compatible micros. Transfer data back and forth between your desktop PC and the Z88, using the Z88's PCLINK – which also converts resident Z88 software files into either Wordstar or Lotus 1-2-3 files. A BBCLINK for BBC micros is also available.

Or over the phone!

The Z88's optional modem means you can send or receive data from another Z88 or an IBM-compatible over the phone. Download your day's work and clear your RAM ... pick up tomorrow's programme and save it ... all you need is a phone socket and a modem.
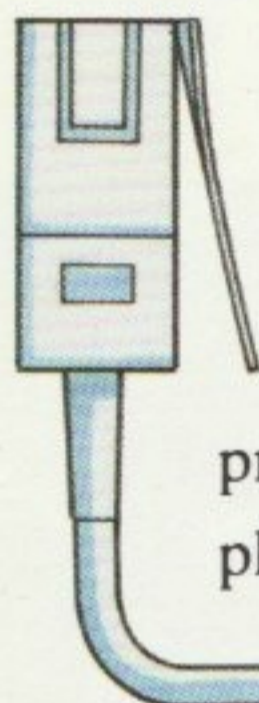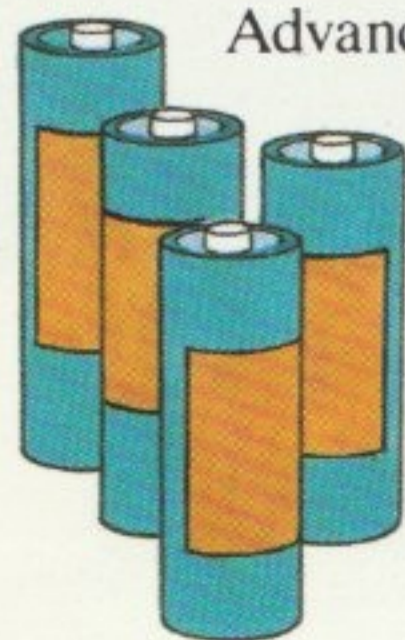
Printing without problems

The Z88 drives virtually any printer – serial or parallel – directly through either of the Z88's printer cables.
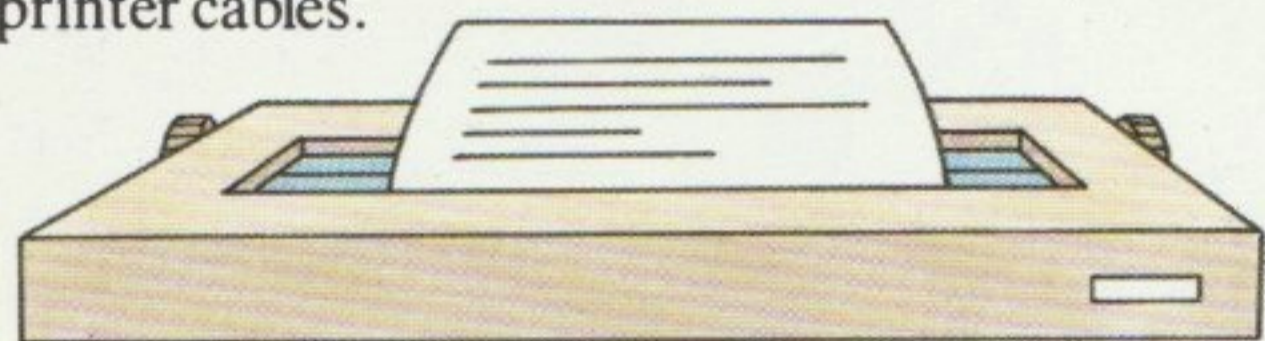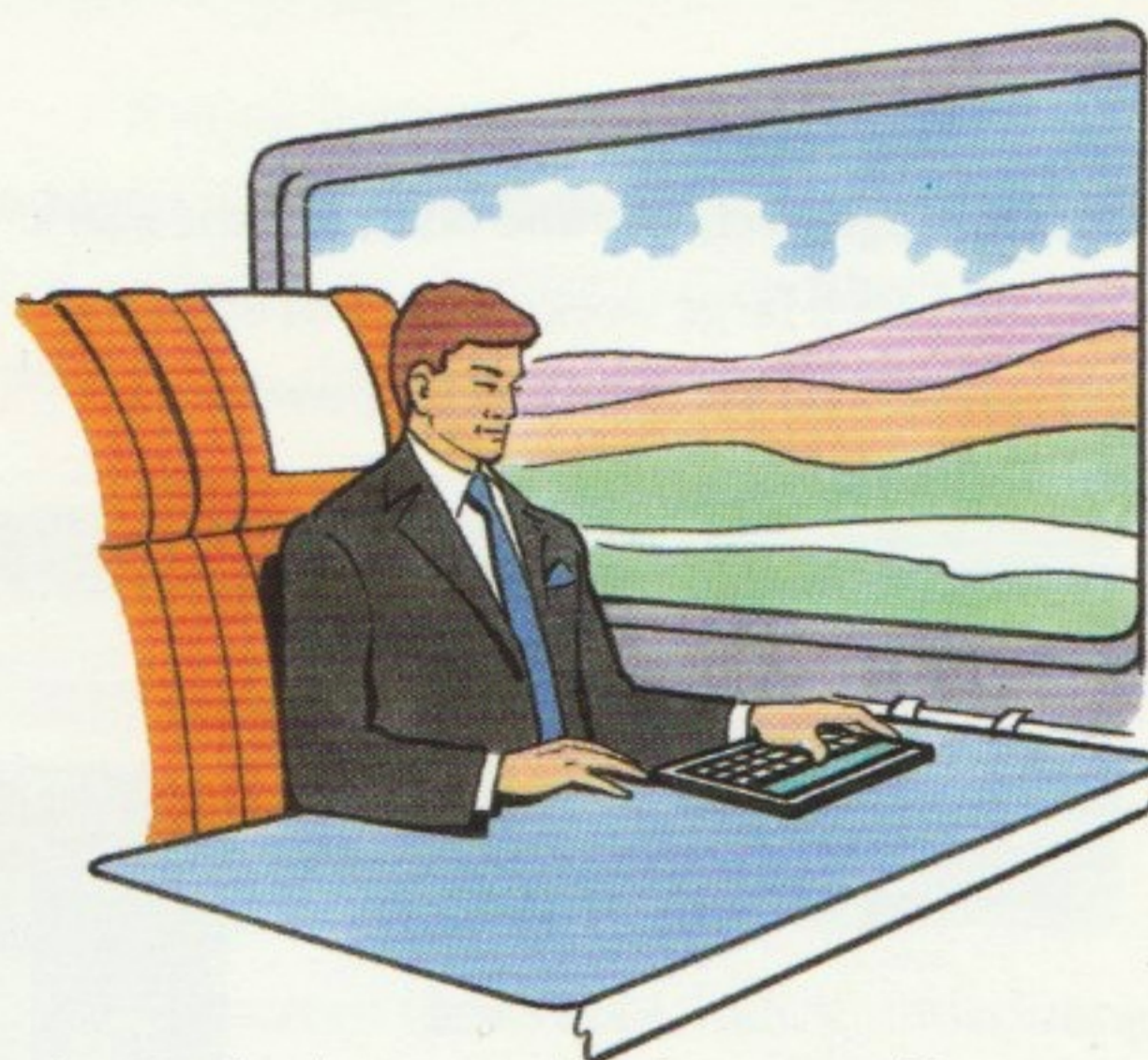
20 hours computing on four AA batteries

Advanced technology slashes power consumption – and combines with a bright, crisp, 8-line by 80-character supertwist LCD display to give you at least 20 hours of full-facility computing.

Make time spent travelling *work* for you . . .
Everything you need for 20 hours' live computing is packed within the body of your Z88. Less than an inch slim, less than the size of an A4 pad, it simply slips into your briefcase. *And* leaves you room for a collapsible umbrella – after all, you won't need files, calculator, note-pad, address book, pens, diary ...

Wherever you are, you're in touch!

From office to home, from home to Helsinki or Tokyo – you can take *all* your office facilities with you, checking back and updating daily. Writing your minutes in Birmingham? Send them by phone to head office for printing and distribution.

Checking appointments made for you? Get them over the phone – direct to your Z88.

As unobtrusive as a pocket calculator

No fuss, no noise ... the Z88 has a 'silent' keyboard, and takes up very little space. Inoffensive on public transport, unobtrusive in meetings or lectures...and capable in every environment, with its built-in word-processor, spreadsheet, database and personal management software always available.

AN OVERVIEW OF THE Z88

Supertwist LCD screen

A breakthrough in clarity and contrast, the Z88's screen provides a large working area of 8 lines × 80 characters. The left-hand sector provides a menu of commands, and on the right, a unique screen map shows exactly where you are on the complete page.

Socket for mains adapter

Screen contrast control

Function keys

Function keys (◇, □), are short-cut keys, to carry out commands. MENU shows you the commands available, and INDEX lets you move from one software application to another – without having to exit or load. A HELP function is also included.
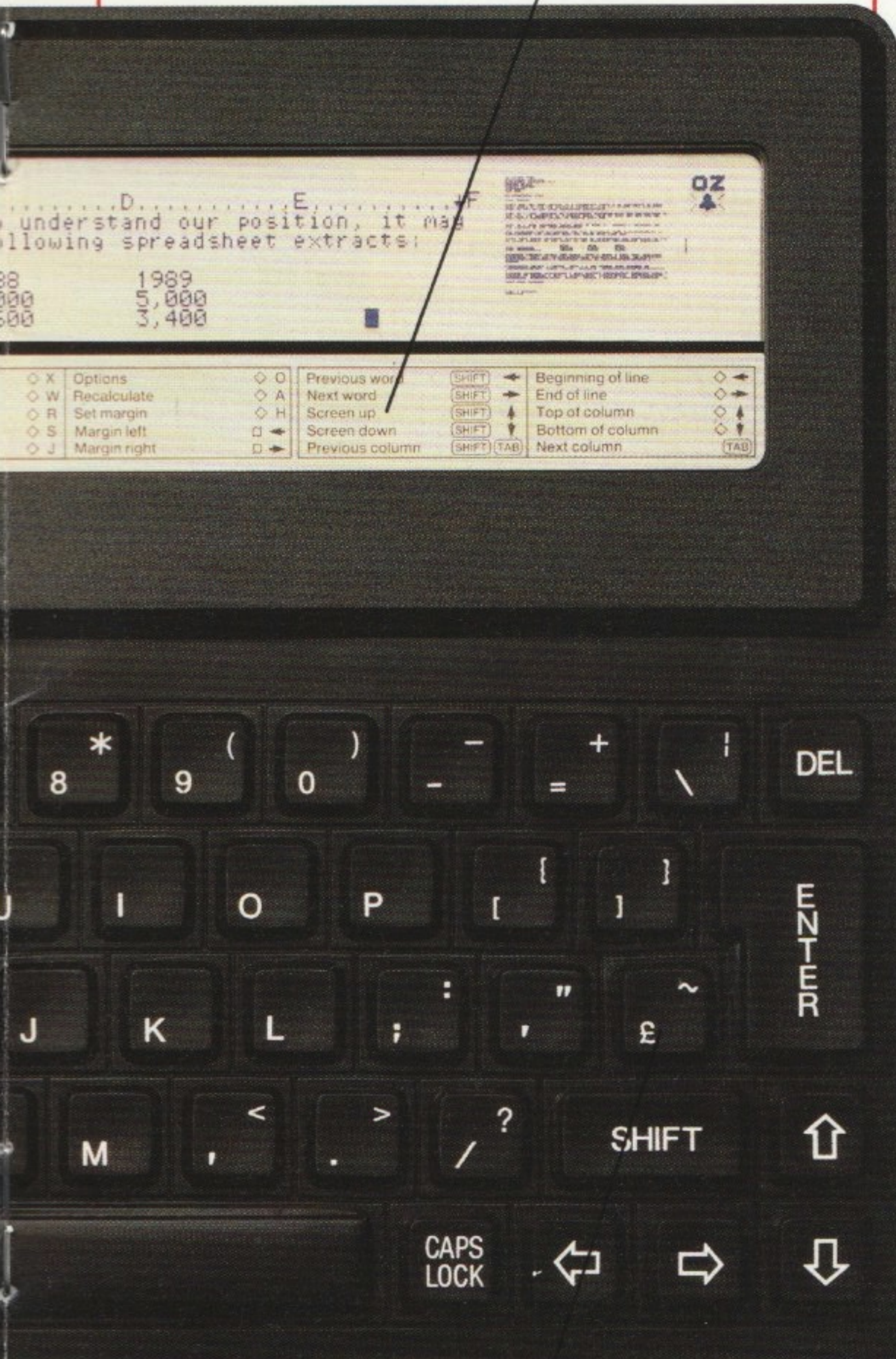
Memory ports

Top up the resident 32K using 32K, 128K, and soon 512K and 1 Mbyte RAM packs. Three expansion ports are available. EPROM packs for permanent storage come in the same sizes.
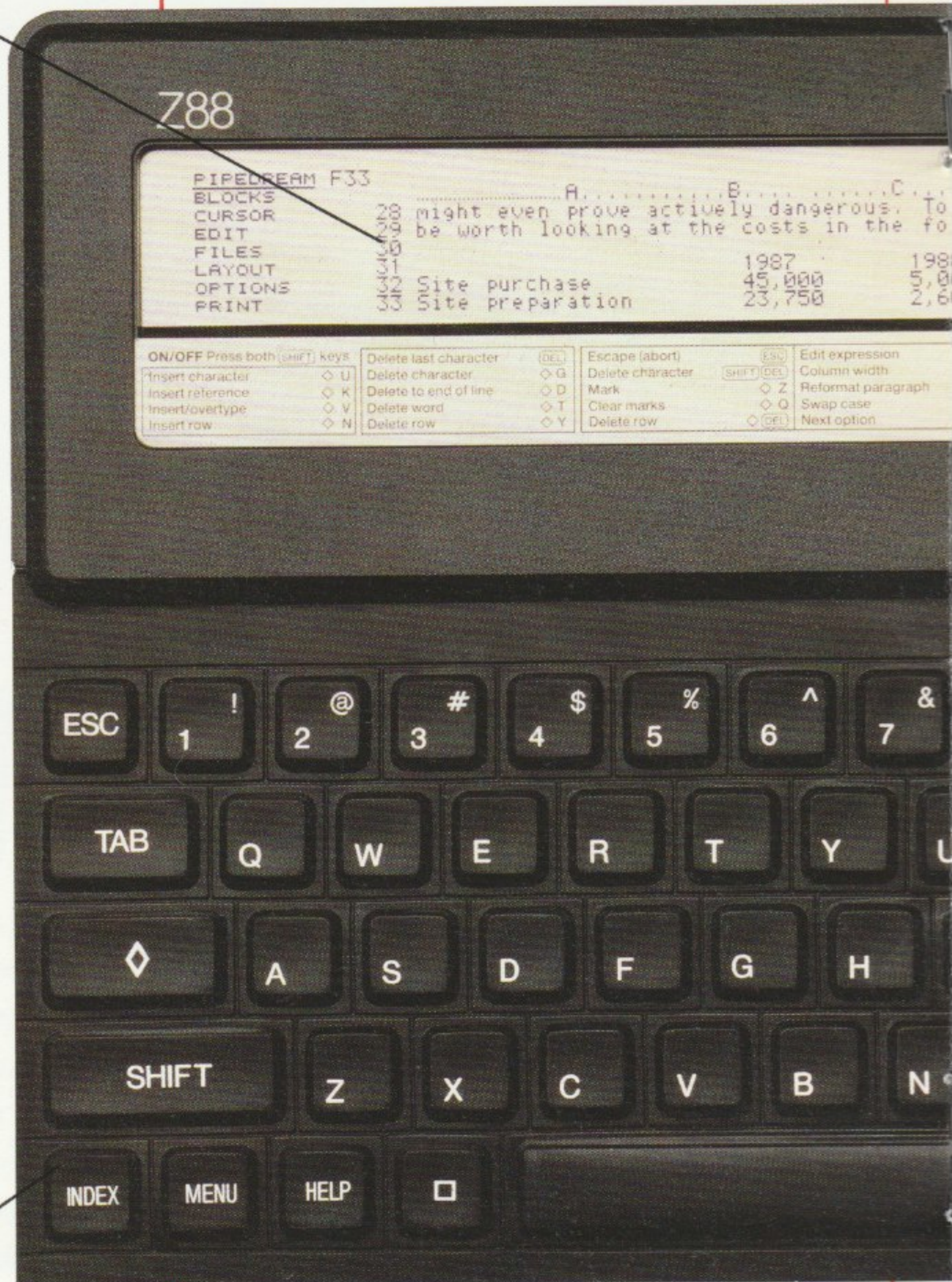
Command template

A permanent quick-reference guide to commands allows beginners to start using the built-in applications software – within minutes of getting the Z88 home.

Support strut

Fixes Z88 at optimum screen-viewing angle.

```
              D.            E.            F
 understand our position, it ma
 llowing spreadsheet extracts:

88        1989
000       5,000
500       3,400
```

◇ X	Options	◇ O	Previous word	SHIFT ←	Beginning of line	◇ ←
◇ W	Recalculate	◇ A	Next word	SHIFT →	End of line	◇ →
◇ R	Set margin	◇ H	Screen up	SHIFT ↑	Top of column	◇ ↑
◇ S	Margin left	□ ←	Screen down	SHIFT ↓	Bottom of column	◇ ↓
◇ J	Margin right	□ →	Previous column	SHIFT TAB	Next column	TAB

RS232 port

Connects to serial and parallel printer cable, and to I/O cable for transfer and receipt of IBM ASCII and BBC BASIC data.
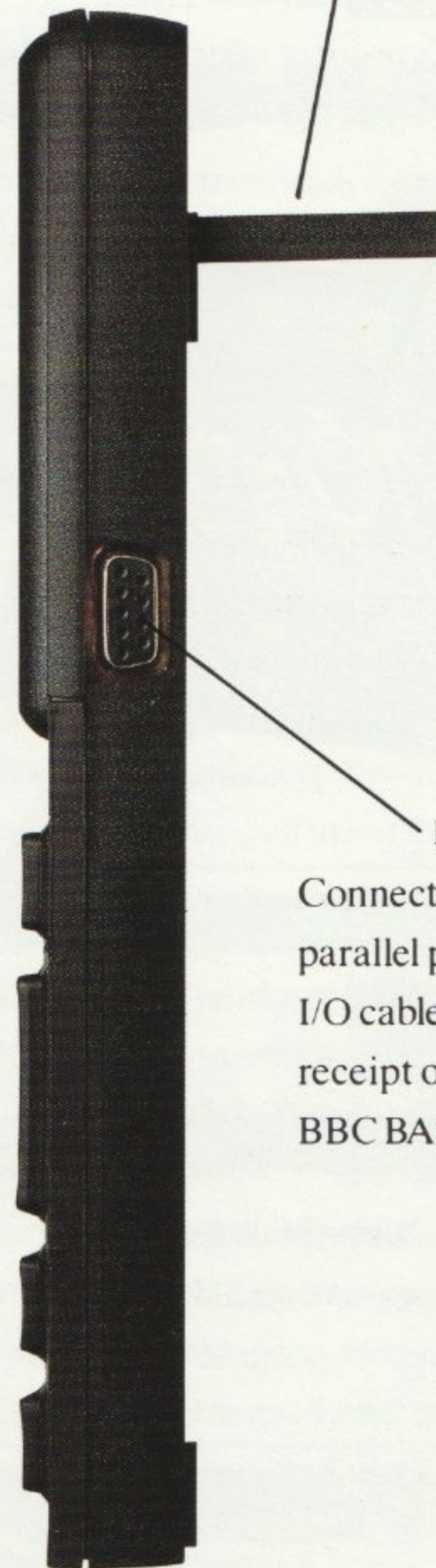
Keyboard

Silent, short-travel, full-sized QWERTY keys allow novices to type easily, experts to type at high speed – without disturbing others.
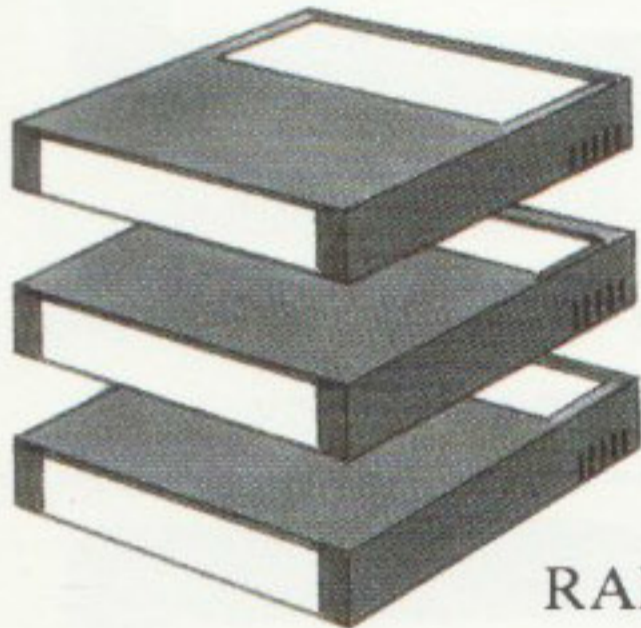
A COMPLETE COMPUTING SYSTEM

The Z88 is much more than a stand-alone personal computer. It's the core of a comprehensive computing *system*, that allows you to take full advantage of the computer's remarkable potential.

Accessories and peripherals include:

RAM Packs

Up to three RAM packs can be plugged into the front of the Z88. They require no external power, and are available with 32K and 128K capacity. 512K and 1 Mbyte RAM packs will be available in the first quarter of 1988.
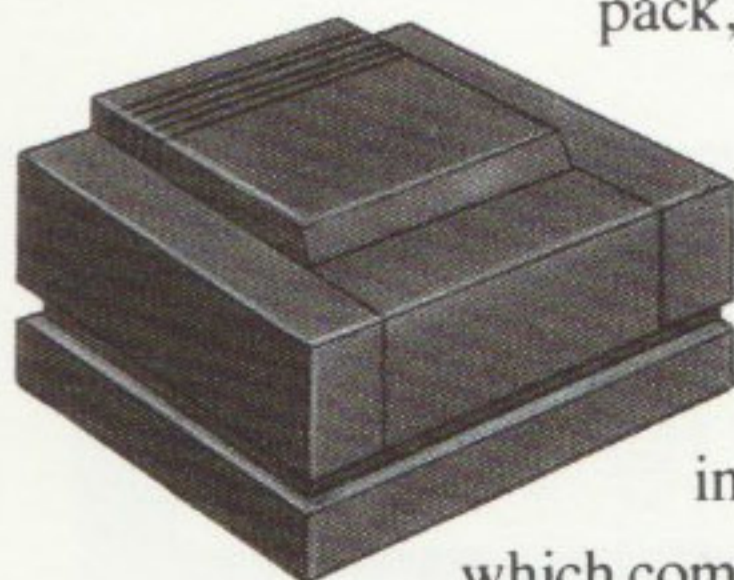
EPROM Packs

The Z88's permanent storage – Erasable Programmable Read Only Memory packs – are also available in 32K and 128K. Where other machines have to rely on cassettes, diskettes or hard disks, EPROMs offer *solid-state* storage with very rapid access to data and absolute reliability. 512K and 1 Mbyte packs will be available in the first quarter of 1988.

EPROM Eraser

When a data file has been saved onto an EPROM pack, it stays there until you decide to erase all the data on it. At that point, simply insert the pack into the EPROM Eraser, which completely deletes the data – leaving you with a blank EPROM pack, ready for re-use.

PCLINK

A package consisting of software disk and RS232 serial cable, PCLINK allows the transfer and receipt of files between the Z88, and an IBM or compatible PC. As well as standard ASCII files, it converts resident Z88 software files into either Wordstar or Lotus 1-2-3 files.

BBCLINK

This connects the Z88 to the BBC Micro for file import/export purposes. The Z88's resident software is compatible with View Professional.

Serial Printer Cable

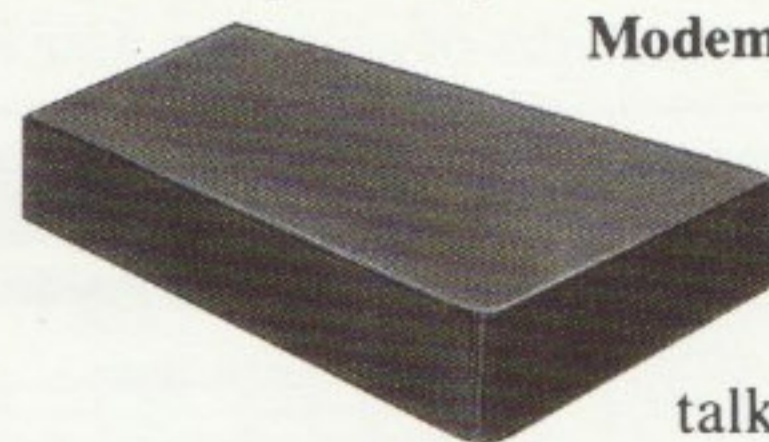This connects the Z88 to any printer with a standard serial port.

Parallel Printer Cable

This connects the Z88 to any printer with a standard parallel port.
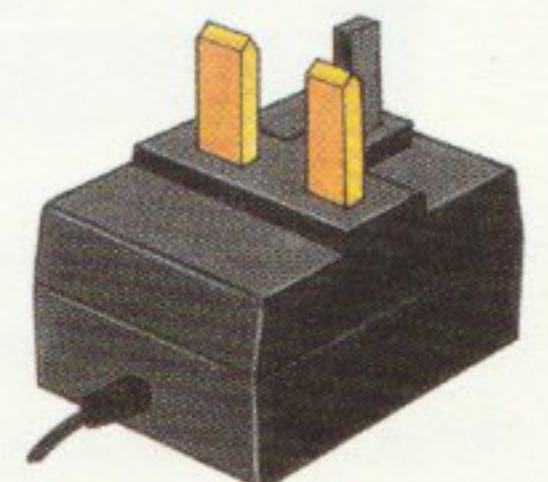
Modem

Compact, BABT-approved, modem. Allows the Z88 to talk to other computers via telephone lines.
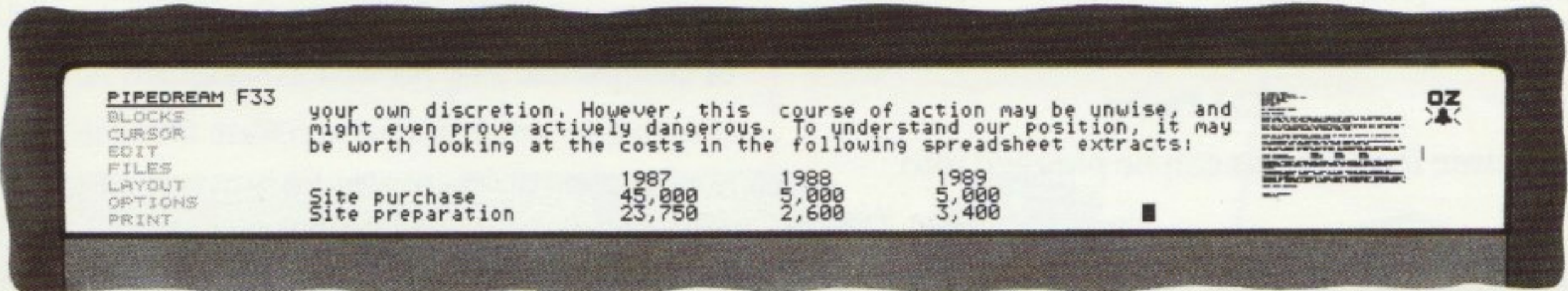
Mains Adapter

A compact unit that helps preserve battery life, and is useful when the Z88 is in constant use in a fixed position.
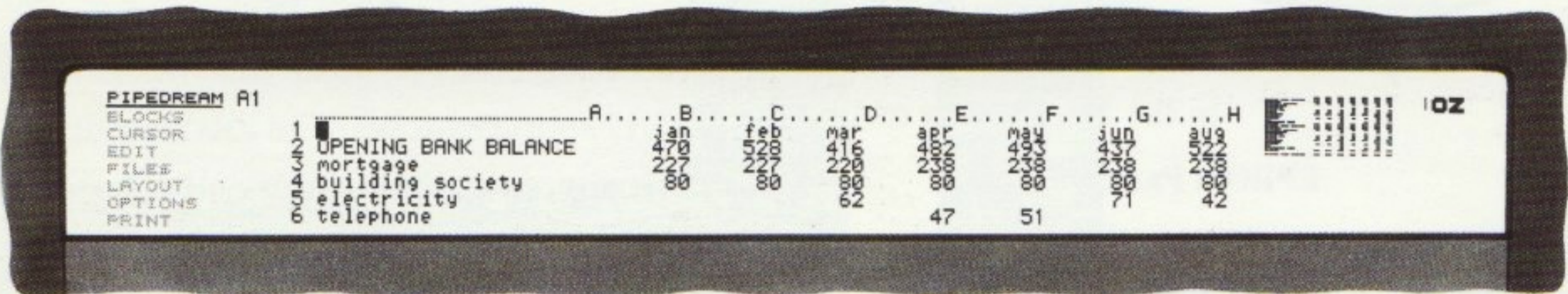
Z88 SOFTWARE IN ACTION

The Z88's ingenious built-in software suite lets you switch between any two applications – even word processing and spreadsheet – *without* loading separate software into the computer's memory.

Switch from writing a letter to find an address … from composing a report to carrying out a calculation … move a spreadsheet into a document – simply press a couple of keys!

```
PIPEDREAM F33      your own discretion. However, this  course of action may be unwise, and
BLOCKS             might even prove actively dangerous. To understand our position, it may
CURSOR             be worth looking at the costs in the following spreadsheet extracts:
EDIT
FILES                              1987          1988      1989
LAYOUT          Site purchase      45,000        5,000     5,000
OPTIONS         Site preparation   23,750        2,600     3,400
PRINT
```

Word processing Facilities include block marking and movement, search-and-replace, multi-column layout. The full WYSIWYG (What You See Is What You Get) screen shows bold, italics, underlining, centering, and dynamic page breaks. And a page map shows the text layout on every page.
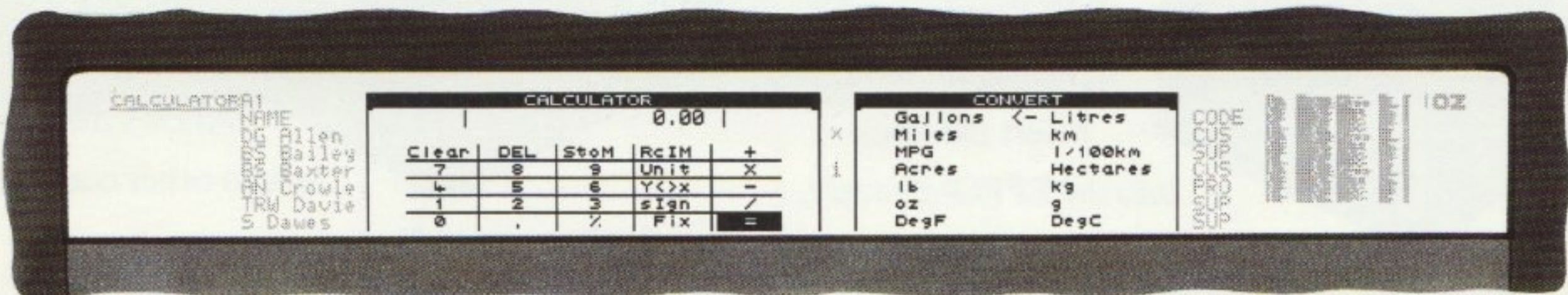
```
PIPEDREAM A1                          A.....B.....C.....D.....E.....F.....G.....H...
BLOCKS                                jan   feb   mar   apr   may   jun   aug
CURSOR          1
EDIT            2 OPENING BANK BALANCE 470   528   416   482   493   457   355
FILES           3 mortgage            227   227   220   238   238   238   255
LAYOUT          4 building society     80    80          80    80    80    80
OPTIONS         5 electricity                      62                71    42
PRINT           6 telephone                             47    51
```

Spreadsheet Invaluable for financial planning, the Z88's spreadsheet allows you to define a series of formulae within cells (where a row and a column meet) and then to enter a series of numerical variables for manipulation. Profit and loss … cashflow … budgets … all arrived at quickly, easily.

```
PIPEDREAM A1   NAME       TITLE                 COMPANY              TOWN        CODE
BLOCKS         DG Allen   Managing Director     Teltronix Ltd        Reading     CUS
CURSOR         BS Bailey  Marketing Director    SBJ Ltd              London      SUP
EDIT           BS Baxter  Marketing Manager     JK Mouldings plc     Oxford      CUS
FILES          AN Crowley Production Director    Ringwood (UK) Ltd    London      PRO
LAYOUT         TRW Davies Managing Director     Davies & Son Ltd     Manchester  SUP
OPTIONS        S Dawes    Production Director    Techexpo             Cambridge   SUP
PRINT
```

Database The Z88's database software works on the same principle as spreadsheet – with each piece of data held in its own cell, so that it can be manipulated into various types of sequence. Use it for mailing lists, membership lists, parts lists … or simply see it as the ultimate in address and telephone books!

```
CALCULATOR A1              CALCULATOR                         CONVERT
        NAME                           0.00                 Gallons  <- Litres      CODE
        DG Allen                                            Miles       km          CUS
        BS Bailey    Clear  DEL  StoM  RcIM    +            MPG         l/100km     SUP
        BS Baxter     7    8    9    Unit    X              Acres       Hectares    CUS
        AN Crowley    4    5    6    Y<>x    -              lb          kg          PRO
        TRW Davie     1    2    3    sIgn    /              oz          g           SUP
        S Dawes       0    .    %    Fix     =              DegF        DegC        SUP
```

Popdowns The powerful built-in *calculator* (which also offers conversions), *clock*, *calendar* and *alarms* all come as 'pop-down' screens which overlay the document you're working on.

There's also a *diary*, which (unlike your own!) can be laid out however you like. Used with the Z88's calendar and clock it finds dates, and sets alarms to remind you of things to do.

Clearly, the Z88 is quite unlike any other type of computer. Not surprisingly, a lot of people have a lot of questions about it. A selection are shown here – but if we haven't answered your question, simply write to The Z88 Information Desk, Dept. APP1, Bridge House, 10 Bridge Street, Cambridge, CB2 1UE.

Can I program the Z88 myself?
Certainly. The Z88's resident operating software includes BBC BASIC Z80. You can write your

$$E = MC^2$$
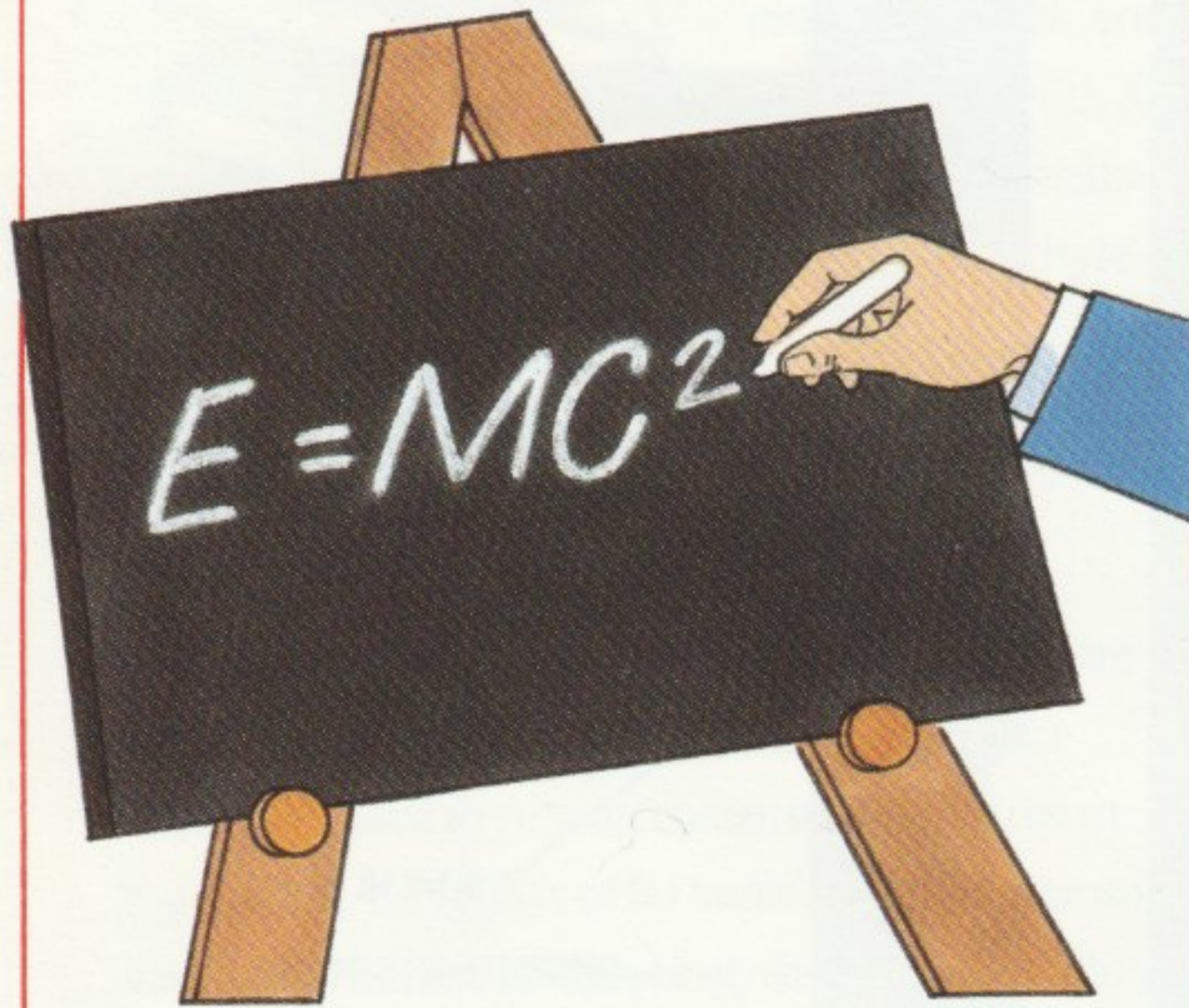
own programs, using the machine's built-in BBC BASIC interpreter, and save them onto EPROM. Simply contact M-Tec on 0603 870620 for the appropriate manual.

The Z88 is an ideal vehicle for learning BASIC programming – and ideal for teachers who can take it home, prepare programs the night before, then load the data back into the school PC.

Will I lose data when I change the batteries?
No. A built-in capacitor stores energy as you switch from one set of batteries to another. If you haven't a spare set handy, simply use the mains adapter. Or save all your data onto an EPROM

cartridge – the Z88 warns you when the batteries are running low.

Turning the Z88 off simply puts it into 'sleep' mode: all data is held in the memory – and when you switch on again, you're faced with your document, exactly as you left it. There's no booting-up, no loading!

How rugged is the Z88?
From the start, the Z88 was designed to stand up to the rigours of life in transit. Solid-state memory packs mean no delicate disks – or disk drives. The one-piece soft rubber cover of the keyboard means that spilt coffee – or even a little rain – ceases to be a catastrophe. And the LCD screen is far tougher than its conventional CRT equivalent.

On the road, on the farm, in the classroom, on site (and moving between any of them), the Z88's high-impact plastic casing stands up to the worst that travel can dish out.

Moving between a number of offices, I use several different printers. Is reconfiguring difficult?
Not at all. A popdown printer editor screen allows you to configure Z88 codes to match a wide range
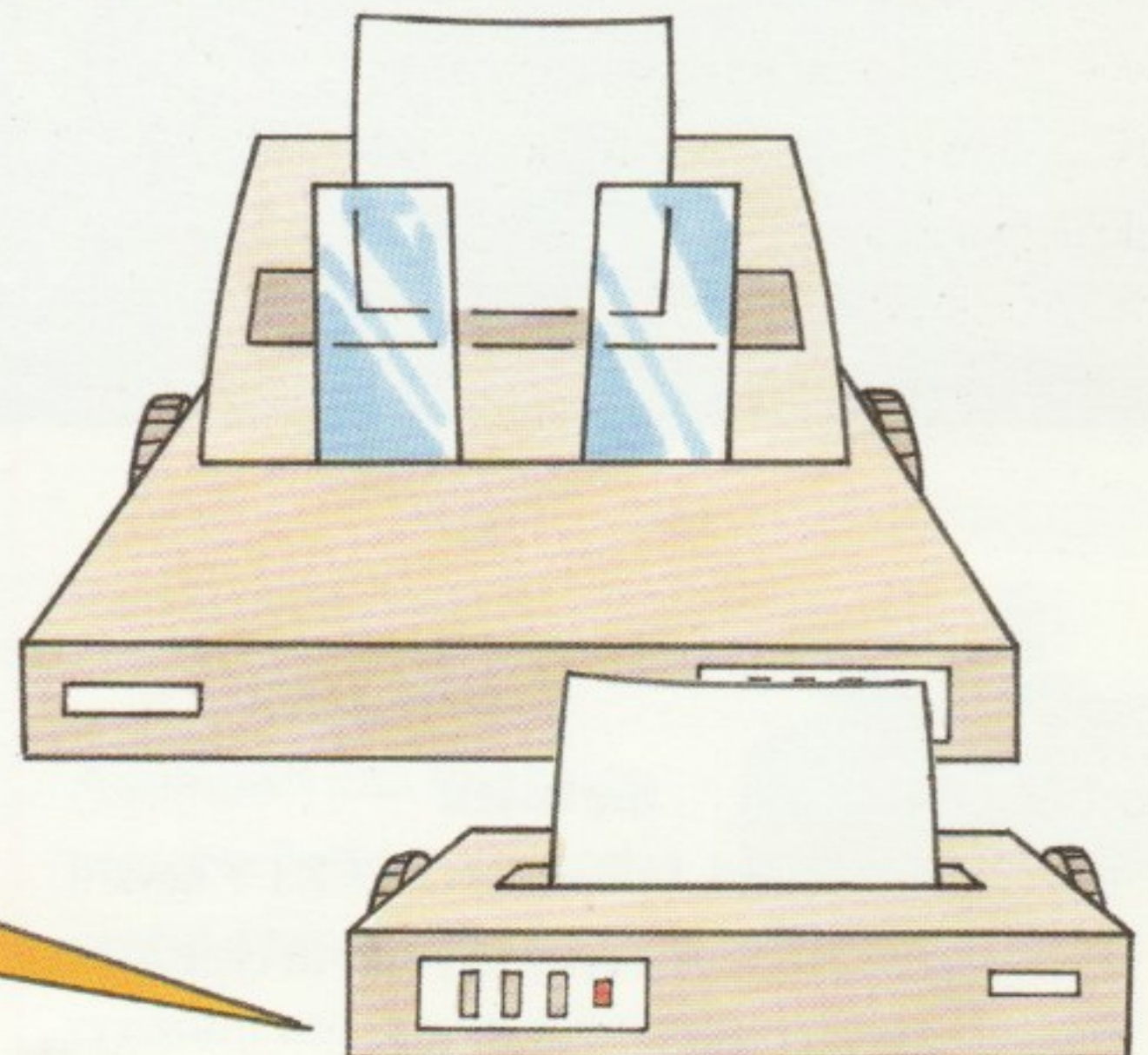
of printers, and above all, to store printer definitions if you're using more than one type.

Once you've stored each printer definition, it takes a few key-pushes to invoke them. All you need in addition is a Z88 serial or parallel printer cable.
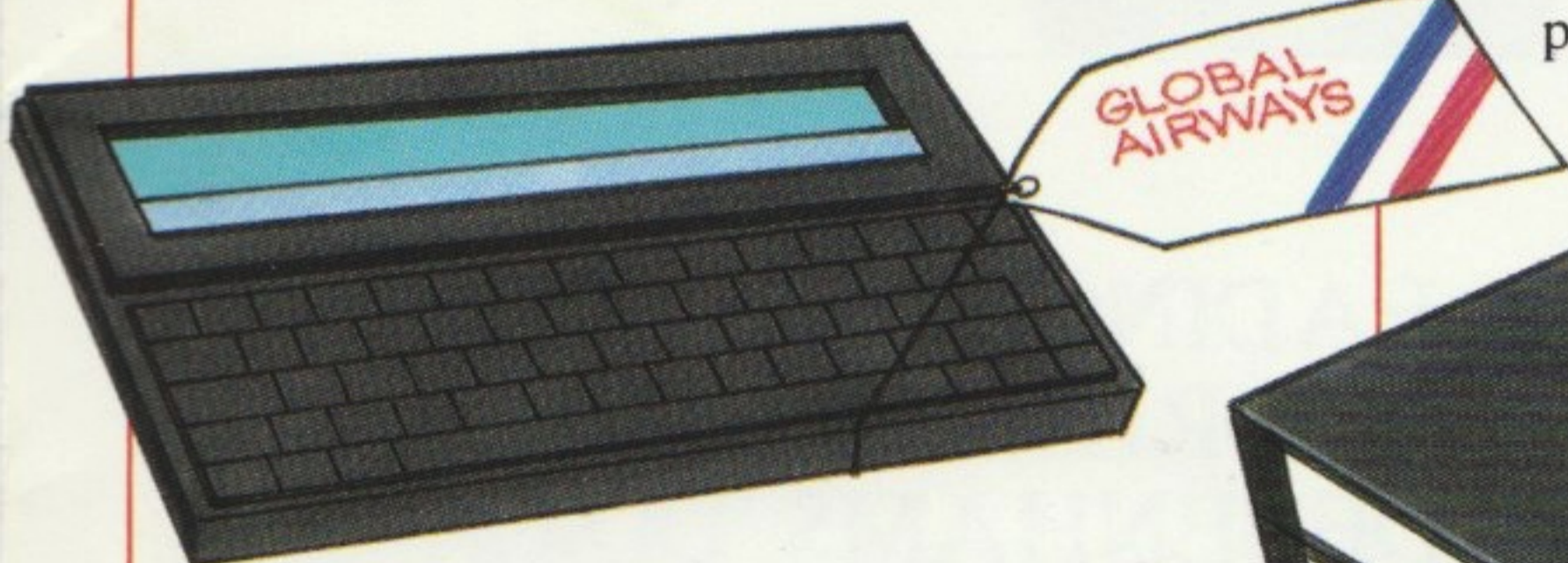
Can I carry diary entries over from day to day?
Certainly. And alarms you may have set as appointment reminders, too.

The Z88's free-form diary is limitless within the constraints of memory, allows information to be prioritised at four levels, and in conjunction with the Z88's calendar, alarms, and clock can provide you with a secretarial reminder service for the rest of your life!

Will the Z88 work abroad?
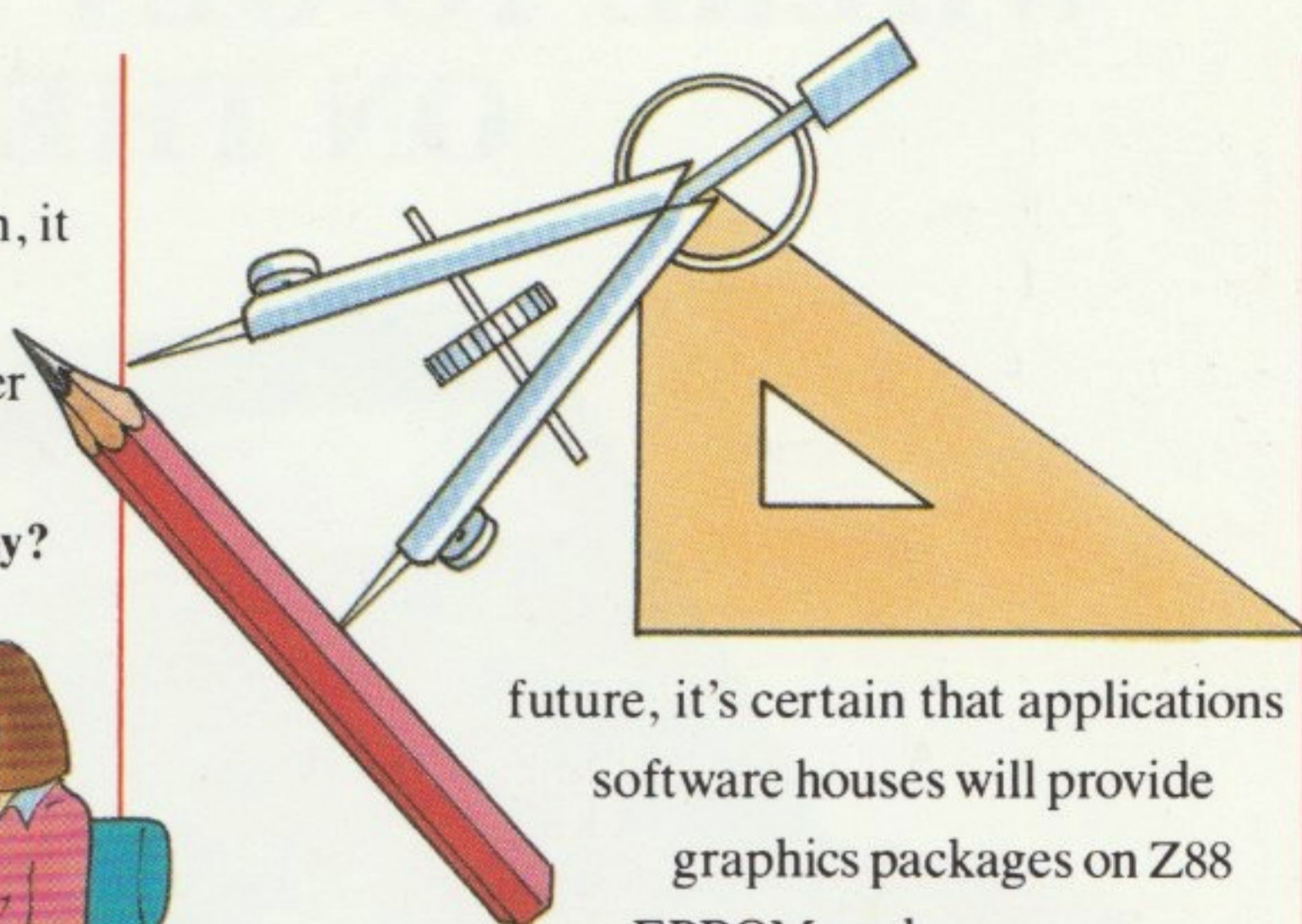Yes. Battery-power makes the Z88 a genuine go-anywhere machine – for journalists in the field, film-makers on location, even naturalists in the jungle! The Z88's AA batteries are available worldwide. And universal adapters for the Z88's own mains adapter are available at airports and electrical shops.

At airport security checks, it's probably wise to ask for your Z88 to be inspected by hand, as some electronic scanners may affect the EPROM cartridges.

Does the Z88 have any graphics capability?
The Z88's new-generation supertwist screen is ideally suited to high-resolution graphics. On a memory-expanded machine, it's possible to use a 256×64 pixel MAP using machine code calls. And user-definable characters are available. In the near future, it's certain that applications software houses will provide graphics packages on Z88 EPROM packs.

Will the Z88 interface to a monitor or disk drive?
Not at the moment. But it's possible for third-party developers to provide the hardware and software for both, via the Z88's RS232 port.

What's the long-term future for the Z88?
In the few short months since launch, Z88 user magazines have already started to appear – and various third-party applications and firmware packages are already under development.

As Z88s become more widespread, so more software developers will produce specialised Z88 software, available on convenient, pocketable EPROM cartridges – should you want anything more than the built-in software!
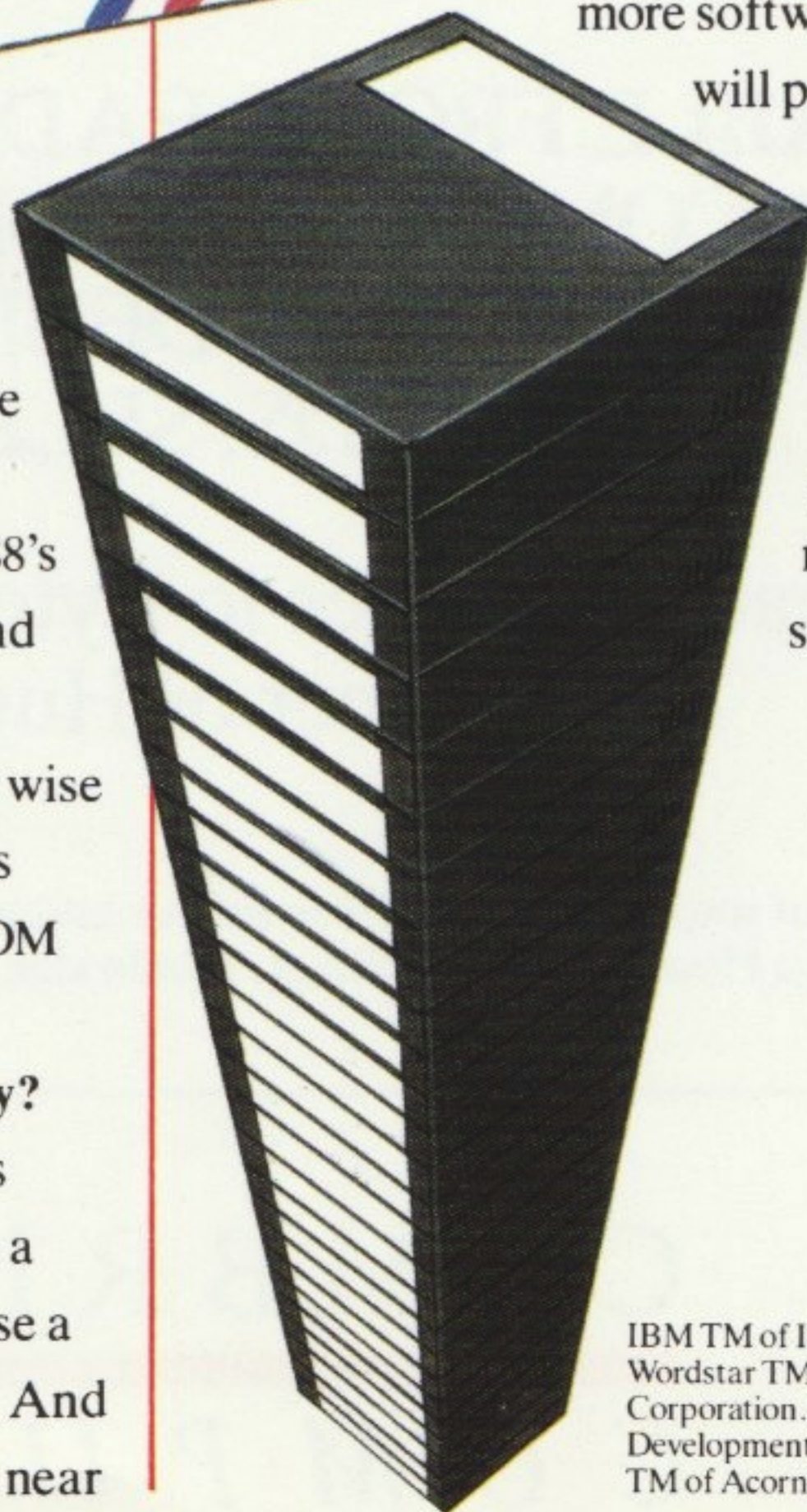
GLOBAL AIRWAYS

WHERE TO GET YOUR HANDS ON THE Z88

AVAILABLE FROM LEADING ELECTRICAL AND COMPUTER STORES, ALLDERS, COMET, COMET AT DEBENHAMS, DIXONS, HARRODS, SELFRIDGES.

Trade enquiries to Bytech Peripherals, Northamber or Hugh Symons.

For the name of your nearest stockist or further information, contact Cambridge Computer at Bridge House, 10 Bridge Street, Cambridge, CB2 1UE. Tel. (0223) 312216.

CAMBRIDGE
COMPUTER